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NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

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NEWS IPC8 For general information regarding STN implementation of IPC 8

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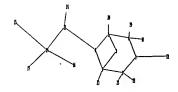
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1  2  3  4  5  6  7
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exact/norm bonds :
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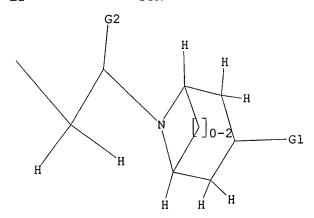
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1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 11:CLASS 13:CLASS
14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS

=> d 11

L1 HAS NO ANSWERS

L1 STR



G1 C,O,S G2 C,H

Structure attributes must be viewed using STN Express query preparation.

50 ANSWERS

1336 ANSWERS

=> s 11

SAMPLE SEARCH INITIATED 14:31:37 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 602 TO ITERATE

100.0% PROCESSED 602 ITERATIONS

INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 10568 TO 13512

PROJECTED ANSWERS: 736 TO 1664

L2 50 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 14:31:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 11446 TO ITERATE

100.0% PROCESSED 11446 ITERATIONS

SEARCH TIME: 00.00.01

L3 1336 SEA SSS FUL L1

=> file caplus

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FULL ESTIMATED COST 172.55 172.76

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http://www.cas.org/infopolicy.html

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L4 217 L3

=> s 14 and py<2002

21897371 PY<2002 L5 177 L4 AND PY<2002

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L5 ANSWER 1 OF 177 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:284138 CAPLUS

DOCUMENT NUMBER:

142:355256

TITLE:

Preparation of tricyclic-substituted piperidinols and

analogs as chemokine receptor antagonists

INVENTOR(S):

Luly, Jay R.; Nakasato, Yoshisuke; Ohshima, Etsuo; Harriman, Geraldine C. B.; Carson, Kenneth G.; Ghosh,

Shomir; Elder, Amy M.; Mattia, Karen M.

PATENT ASSIGNEE(S):

USA

SOURCE:

U.S. Pat. Appl. Publ., 194 pp., Cont.-in-part of U.S.

Ser. No. 989,086, abandoned.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

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US	6509	346			B2		20030121												
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FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 20070315 US 2007060592 Α1 US 2006-595653 20061110 AU 2007200261 Α1 20070208 AU 2007-200261 20070123 PRIORITY APPLN. INFO.: US 1998-148823 A2 19980904 US 1999-235102 A2 19990121 US 1999-362837 A2 19990728 US 2000-627886 B2 20000728 US 2001-989086 B2 20011121 WO 2002-US36953 W 20021113 US 1998-10320 B2 19980121 AU 2002-352772 A3 20021113 US 2004-487168 A1 20041007

OTHER SOURCE(S):

MARPAT 142:355256

GT

AΒ Therapeutically effective compds. I [Z = (un)substituted heterocyclic ring fused to one or more carbocyclic aromatic rings; n = 1-4; M = NR2, CR1R2; R1 = H, OH, N3, etc.; R2 = OH, halo, acyl, aryl, etc.; R70, R71 = H, OH, N3, etc.; R72, R73 = O, N2, halo, etc.] and II [Z, n are defined as above; R2 = OH, halo, acyl, aryl, etc.] were prepared for treatment of diseases associated with aberrant leukocyte recruitment and/or activation (no data). I and II displayed chemokine binding activities with IC50 values ranging from $< 1 \mu M$ to $< 1000 \mu M$. Thus, the [([1]benzoxepino[2,3b]pyridinylidene)propyl]piperidinol III was prepared in three steps by reaction of 5,11-dihydro-7-methoxy[1]benzoxepino[2,3-b]pyridin-5-one with cyclopropylmagnesium bromide in THF, followed by ring cleavage-dehydrationbromination with HBr, and addition of 4-(4-chlorophenyl)-4-hydroxypiperidine to the bromide in DMF. Major and minor isomers were separated The pharmaceutical compns. comprising the compound I or II is disclosed. IT 324782-01-6P, [1]Benzoxepino[3,4-b]pyridin-7-ol, 5-[3-[3-(4-chlorophenyl)-3-hydroxy-8-azabicyclo[3.2.1]oct-8yl]propylidene]-5,11-dihydro-RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of tricyclic piperidinols and pyrrolidines as chemokine

receptor antagonists for treatment of diseases associated with aberrant leukocyte recruitment and activation)

324782-01-6 CAPLUS RN

CN

[1]Benzoxepino[3,4-b]pyridin-7-ol, 5-[3-(4-chlorophenyl)-3-hydroxy-8azabicyclo[3.2.1]oct-8-yl]propylidene]-5,11-dihydro- (9CI) (CA INDEX NAME)

REFERENCE COUNT:

151 THERE ARE 151 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

CAPLUS COPYRIGHT 2007 ACS on STN ANSWER 2 OF 177

ACCESSION NUMBER:

2002:869579 CAPLUS

DOCUMENT NUMBER:

137:370077

TITLE:

Preparation of tricyclic-substituted piperidinols and

analogs as chemokine receptor antagonists

INVENTOR(S):

Luly, Jay R.; Nakasato, Yoshisuke; Ohshima, Etsuo; Sone, Hiroki; Kotera, Osamu; Harriman, Geraldine C.

B.; Carson, Kenneth G.

PATENT ASSIGNEE(S):

Millennium Pharmaceuticals, Inc., USA

SOURCE:

U.S. Pat. Appl. Publ., 138 pp., Cont.-in-part of U.S.

Ser. No. 627,886.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND DA	ATE APPI	ICATION NO.	DATE				
US 2002169155	A1 20	0021114 US 2	2001-989086	20011121				
US 6613905	B1 20	0030902 US 1	998-148823	19980904				
US 6329385	B1 20	0011211 US 1	999-235102	19990121 <				
US 2002119973	A1 20	0020829 US 1	999-362837	19990728				
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OTHER SOURCE(S): GI

MARPAT 137:370077

AB Therapeutically effective compds. I [Z = (un)substituted cycloalkyl or non-aromatic heterocyclic ring fused to one or more carbocyclic aromatic rings; n = 1-4; M = NR2, CR1R2, OCR1R2O, CH2CR1R2O; R1 = H, OH, N3, etc.; R2 = H, acyl, aryl, etc.; q1 = 0-3; q2 = 0-1; ring containing M is substituted or unsubstituted; and physiol. acceptable salts thereof] were prepared for treatment of diseases associated with aberrant leukocyte recruitment and/or activation (no data). I displayed chemokine binding activities with IC50 values ranging from < 1 μ M to < 1000 μ M. Thus, the

[([1]benzoxepino[2,3-b]pyridinylidene)propyl]piperidinol II was prepared in three steps by reaction of 5,11-dihydro-7-methoxy[1]benzoxepino[2,3-b]pyridin-5-one with cyclopropylmagnesium bromide in THF, followed by ring cleavage-dehydration-bromination with HBr, and addition of 4-(4-chlorophenyl)-4-hydroxypiperidine to the bromide in DMF. Major and minor isomers were separated

IT 324782-01-6P, [1]Benzoxepino[3,4-b]pyridin-7-ol,
5-[3-(4-chlorophenyl)-3-hydroxy-8-azabicyclo[3.2.1]oct-8-

yl]propylidene]-5,11-dihydro-

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of tricyclic piperidinols as chemokine receptor antagonists for treatment of diseases associated with aberrant leukocyte recruitment and activation)

RN 324782-01-6 CAPLUS

CN [1]Benzoxepino[3,4-b]pyridin-7-ol, 5-[3-[3-(4-chlorophenyl)-3-hydroxy-8-azabicyclo[3.2.1]oct-8-yl]propylidene]-5,11-dihydro- (9CI) (CA INDEX NAME)

L5 ANSWER 3 OF 177 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:658747 CAPLUS

DOCUMENT NUMBER: 137:185480

TITLE: Preparation of tricyclic-substituted piperidinols and

analogs as chemokine receptor antagonists

INVENTOR(S): Luly, Jay R.; Nakasato, Yoshisuke; Ohshima, Etsuo;

Sone, Hiroki; Kotera, Osamu; Harriman, Geraldine C. B.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 102 pp., Cont.-in-part of U.S.

Ser. No. 235,102.

CODEN: USXXCO

DOCUMENT TYPE:

Patent English

LANGUAGE: FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATE	NT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20	002119973	A1	20020829	US 1999-362837	19990728
US 6	509346	B2	20030121		
US 6	613905	B1	20030902	US 1998-148823	19980904
US 63	329385	B1	20011211	US 1999-235102	19990121 <
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OTHER SOURCE(S):
                           MARPAT 137:185480
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GΙ

$$M \longrightarrow N \longrightarrow J_n \longrightarrow Z \longrightarrow I$$

Disclosed is a method of treating a subject with a disease associated with aberrant leukocyte recruitment and/or activation. Therapeutically effective tricyclic-substituted piperidinols and analogs thereof, represented by structural formula I [M = CR1R2 where R1 = H, OH, alkyl, (un)substituted alkoxy, SR3; R3 = H or substituted alkyl, (un)substituted alkylcarboxy, alkoxycarbonyl, CN, COOH, CONR4R5; R2 = OH, (un)substituted acyl, NR6R7, (un)substituted alkyl, aryl, etc.; R4-7 = H, (un)substituted acyl, aliphatic aromatic, heterocycle, etc., or, R1, R2, R4 and R5, or R6 and

II

taken together with the atom to which they are bonded form a (un)substituted carbocyclic or heterocyclic ring; Z = (un)substituted cycloalkyl or non-aromatic heterocyclic ring fused to one or more carbocyclic aromatic rings; n = 1-4] and their physiol. acceptable salts are prepared Chemokine binding activities of test compds. are reported with IC50 values ranging from <1 to <1000 μM . Thus, II was prepared via substitution of 5-(3-bromopropylidene)-10,11-dihydro-5H-dibenzo[a,d]cycloheptene with 4-(4-chlorophenyl)-4-hydroxypiperidine.

IT 324782-01-6P

R7

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of tricyclic-substituted piperidinols and analogs as chemokine receptor antagonists for treatment of diseases associated with aberrant leukocyte recruitment and activation)

RN 324782-01-6 CAPLUS

CN [1]Benzoxepino[3,4-b]pyridin-7-ol, 5-[3-[3-(4-chlorophenyl)-3-hydroxy-8-azabicyclo[3.2.1]oct-8-yl]propylidene]-5,11-dihydro- (9CI) (CA INDEX NAME)

L5 ANSWER 4 OF 177 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:462644 CAPLUS

DOCUMENT NUMBER: 137:6174

TITLE: Azabicycloalkyl esters and amides of

2-oxo-2,3-dihydrobenzimidazole-1-carboxylic acid and their preparation, pharmaceutical compositions, and

use as 5-HT4 receptor agonists

INVENTOR(S): Pellegrini, Carlo Maria; Cereda, Enzo; Ezhaya,

Antoine; Schiavi, Giovanni Battista; Sagrata, Angelo;

Giraldo, Ettore

PATENT ASSIGNEE(S): Boehringer Ingelheim Italia S.p.A., Italy

SOURCE: Ital., 62 pp.

CODEN: ITXXBY

DOCUMENT TYPE: Patent LANGUAGE: Italian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO. '	DATE
IT 1298271	B1	19991220	IT 1998-MI305	19980218 <
PRIORITY APPLN. INFO.:			IT 1998-MI305	19980218
OTHER SOURCE(S):	MARPAT	137:6174		
GI				

AB Title compds. I are disclosed [wherein: R = H, Me; Y = O, NH; Z = CH2, bond; n = 0, 1, 2, 3, except that when R1 = H, then $n \neq 0$ or 1; R1 = H, iso-Pr, Et, iso-Bu, cyclopropyl, cyclobutyl, cyclohexyl, vinyl, 2-methylpropenyl, 1-hydroxyethyl, ethynyl, benzyl, CONH2, CONMe2, COCH3, cyano, OR2, SR2, NR3R4; R2 = H, C1-3 alkyl; R3 = H, CH3, CONHEt, CONH2, CO2Et, COCH3, SO2Me; R4 = H, Me; including racemates, enantiomers,

diastereomers, mixts., and physiol. acceptable acid addition salts]. The compds. are serotoninergic agonists, and have a high affinity and specificity for 5-HT4 serotoninergic receptors. As such they are useful for treating a variety of cardiovascular, gastrointestinal, and CNS diseases and disorders. Over 60 compds., including both esters (Y = O) and amides (Y = NH), were prepared For instance, 1-isopropyl-2-oxo-2,3-dihydrobenzimidazole was treated with Cl3COCOCl in THF to give the 1-carbonyl chloride derivative, which reacted with endo-8-n-propyl-8-azabicyclo[3.2.1]octan-3-ol (preparation given) in CH2Cl2 to give title compound

II [Q = n-Pr], isolated as the HCl salt. The similarly prepared compound II.HCl [Q = iso-Bu] bound to porcine striatal 5-HT4 receptors in vitro with a Ki of 3.6 + 10-8 M, but bound to 5-HT3 receptors (NG 108-15 cells) with a weaker Ki of 446 + 10-8 M. Selected I also induced contractions in isolated guinea pig colon, with an efficacy comparable to 5-HT, and with blocking by the known 5-HT4 antagonist GR 113808. 433226-62-1P, endo-8-n-Propyl-8-azabicyclo[3.2.1]oct-3-yl

IT 433226-62-1P, endo-8-n-Propyl-8-azabicyclo[3.2.1]oct-3-yl 3-isopropyl-2-oxo-2,3-dihydrobenzimidazole-1-carboxylate hydrochloride 433226-68-7P, endo-8-n-Propyl-8-azabicyclo[3.2.1]oct-3-yl 3-ethyl-2-oxo-2,3-dihydrobenzimidazole-1-carboxylate hydrochloride 433226-74-5P, endo-8-(3-Methylbutyl)-8-azabicyclo[3.2.1]oct-3-yl 3-isopropyl-2-oxo-2,3-dihydrobenzimidazole-1-carboxylate hydrochloride 433226-75-6P, endo-8-n-Butyl-8-azabicyclo[3.2.1]oct-3-yl 3-isopropyl-2-oxo-2,3-dihydrobenzimidazole-1-carboxylate hydrochloride 433227-48-6P, endo-8-n-Propyl-8-azabicyclo[3.2.1]oct-3-yl 3-ethyl-2-oxo-2,3-dihydrobenzimidazole-1-carboxylate RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; preparation of azabicycloalkyl esters and amides of oxodihydrobenzimidazolecarboxylic acid as 5-HT4 receptor agonists)

RN 433226-62-1 CAPLUS

CN 1H-Benzimidazole-1-carboxylic acid, 2,3-dihydro-3-(1-methylethyl)-2-oxo-, (3-endo)-8-propyl-8-azabicyclo[3.2.1]oct-3-yl ester, monohydrochloride (9CI) (CA INDEX NAME)

Relative stereochemistry.

● HCl

RN 433226-68-7 CAPLUS

CN 1H-Benzimidazole-1-carboxylic acid, 3-ethyl-2,3-dihydro-2-oxo-, (3-endo)-8-propyl-8-azabicyclo[3.2.1]oct-3-yl ester, monohydrochloride (9CI) (CA INDEX NAME)

● HCl

RN 433226-74-5 CAPLUS

CN 1H-Benzimidazole-1-carboxylic acid, 2,3-dihydro-3-(1-methylethyl)-2-oxo-, (3-endo)-8-(3-methylbutyl)-8-azabicyclo[3.2.1]oct-3-yl ester, monohydrochloride (9CI) (CA INDEX NAME)

Relative stereochemistry.

● HCl

RN 433226-75-6 CAPLUS

CN 1H-Benzimidazole-1-carboxylic acid, 2,3-dihydro-3-(1-methylethyl)-2-oxo-, (3-endo)-8-butyl-8-azabicyclo[3.2.1]oct-3-yl ester, monohydrochloride (9CI) (CA INDEX NAME)

RN 433227-48-6 CAPLUS

CN 1H-Benzimidazole-1-carboxylic acid, 3-ethyl-2,3-dihydro-2-oxo-, (3-endo)-8-propyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.

IT 22226-44-4P, endo-8-Isopentyl-8-azabicyclo[3.2.1]octan-3-ol
60205-27-8P, endo-8-Propyl-8-azabicyclo[3.2.1]octan-3-ol
60205-34-7P, endo-8-Butyl-8-azabicyclo[3.2.1]octan-3-ol
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)

(intermediate; preparation of azabicycloalkyl esters and amides of oxodihydrobenzimidazolecarboxylic acid as 5-HT4 receptor agonists)

RN 22226-44-4 CAPLUS

CN 8-Azabicyclo[3.2.1]octan-3-ol, 8-(3-methylbutyl)-, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 60205-27-8 CAPLUS

CN 8-Azabicyclo[3.2.1]octan-3-ol, 8-propyl-, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 60205-34-7 CAPLUS

CN 8-Azabicyclo[3.2.1]octan-3-ol, 8-butyl-, (3-endo)- (9CI) (CA INDEX NAME)

ANSWER 5 OF 177 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:817246 CAPLUS

DOCUMENT NUMBER: 135:357843

Preparation of 2-Aryl indole derivatives for use as TITLE:

tachykinin receptor antagonists

INVENTOR(S): Dinnell, Kevin; Elliott, Jason Matthew; Hollingworth,

Gregory John; Ridgill, Mark Peter; Shaw, Duncan Edward

PATENT ASSIGNEE(S): UK

SOURCE: U.S. Pat. Appl. Publ., 37 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

GΙ

KIND	DATE	APPLICATION NO.		DATE
A1	20011108	US 2001-782422		20010213 <
		GB 2000-3397	Α	20000214
				A1 20011108 US 2001-782422

OTHER SOURCE(S): MARPAT 135:357843

Ι

AB 2-Aryl indole derivs. I (wherein Rla, Rlb, and R2 = a variety of substituents; R3 = optionally substituted Ph, biphenyl or naphthyl or heteroaryl group; R4 = H, (C1-6)alkyl, carbonyl (=0), (CH2)pphenyl or a (C1-2)alkylene bridge across the piperidine ring; R5 and R6 = variety of substituents; or R5 and R6 together are linked so as to form an optionally substituted 5-or 6-membered ring; X = O or S, two H atoms, boxHNH or boxHN(C1-6 alkyl); Y = straight or branched (C1-4)alkylene, (C2-4) alkenylene or (C2-4) alkynylene chain; the dotted line represents an optional double bond; m = 0, 1, 2, 3, 4; n = 1, 2, 3, 4; and p = 1, 2, 3, 4), or a pharmaceutically acceptable salt thereof, were prepared, and their use as tachykinin receptor antagonists evaluated. Thus, diisopropylethylamine and bromoacetonitrile were added to a loaded resin (synthetic preparation given) in N-methylpyrrolidinone, to which was added a solution of 6-(methylsulfonyl)spiro-[2H-1-benzopyran-2,4'-piperidin]-4(3H)-one in THF to give 1'-{3-[5-chloro-2-(4-chlorophenyl)-1H-indol-3-yl]-1-oxopropyl}-6-(methylsulfonyl)spiro(2H-1-benzopyran-2,4'-piperidin)-4(3H)-one. compds. are of particular use in the treatment or prevention of depression, anxiety, pain, inflammation, migraine, emesis or postherpetic neuralgia. Biol. data are given.

ΙT 371970-31-9P

RN

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aryl indole derivs. as tachykinin receptor antagonists for treatment for)

371970-31-9 CAPLUS

CAPLUS COPYRIGHT 2007 ACS on STN L5 ANSWER .6 OF 177

ACCESSION NUMBER: 2001:785490 CAPLUS

DOCUMENT NUMBER: 136:85971

Novel tropane-based irreversible ligands for the TITLE:

dopamine transporter

AUTHOR(S): Zou, Mu-Fa; Kopajtic, Theresa; Katz, Jonathan L.;

Wirtz, Sara; Justice, Joseph B., Jr.; Newman, Amy

Hauck

Medicinal Chemistry and Psychobiology Sections, CORPORATE SOURCE:

National Institute on Drug Abuse-Intramural Research

Program, Baltimore, MD, 21131, USA

Journal of Medicinal Chemistry (2001), SOURCE:

44(25), 4453-4461

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal English LANGUAGE:

CASREACT 136:85971 OTHER SOURCE(S):

 3α -(Diphenylmethoxy)tropane (benztropine) and its analogs are tropane ring-containing dopamine uptake inhibitors that display binding and behavioral profiles that are distinct from cocaine. The authors previously prepared a benztropine-based photoaffinity label [125I]-N-[4-(4'-azido-3'-iodophenyl)butyl]- 3α -[bis(4'fluorophenyl)methoxy]tropane, (I), that covalently attached to the 1-2transmembrane spanning region of the dopamine transporter (DAT). This was in contrast to the 4-7 transmembrane spanning region labeled by a cocaine-based photoaffinity label, (RTI 82) (II). To characterize further these different binding domains, photoaffinity ligands that had the 4'-azido-3'-iodophenyl substituent extended from the same position on the tropane ring were desirable. Thus, identification of the optimal alkyl linker between this substituent and the tropane nitrogen in the benztropine series was investigated to ultimately prepare the identical N-substituted analog of II. In this pursuit, the N-[4-(4'-azido-3'iodophenyl)propyl] analog of 3α -[bis(4'-fluorophenyl)methoxy]tropane was synthesized as well as two isothiocyanate analogs that do not require photoactivation for irreversible binding. The synthesis of these target compds. was achieved using a modification of the strategy developed for I. Evaluation of these compds. for displacing [3H]WIN 35 428 binding at DAT in rat caudate putamen revealed that the 4'-azido-3'-iodophenylbutyl substituent, found in I, provided optimal binding affinity and was chosen to replace the N-CH3 group on II. Both the 4'-azido-3'-iodophenyl- and the 4'-isothiocyanatophenylbutyl analogs of II were synthesized. Both products bound to DAT with comparable potency (IC50 = 30 nM) to RTI 82. In addition, the 4'-isothiocyanatophenylbutyl analog of II demonstrated wash-resistant displacement of [3H]WIN 35 428 in HEK 293 cells stably transfected with hDAT. These ligands will provide important tools for further characterizing the binding domains for tropane-based dopamine uptake inhibitors at the DAT.

387357-10-0P 387357-11-1P 387357-19-9P

ΙT

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(preparation and dopamine transporter binding of tropane-based irreversible ligands with interest in developing cocaine abuse treatment)

RN 387357-10-0 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 8-[3-(4-azido-3-iodophenyl)propyl]-3-[bis(4-fluorophenyl)methoxy]-, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 387357-11-1 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 3-[bis(4-fluorophenyl)methoxy]-8-[3-(4-isothiocyanatophenyl)propyl]-, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 387357-19-9 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 3-[bis(4-fluorophenyl)methoxy]-8-[4-(4-isothiocyanatophenyl)butyl]-, (3-endo)- (9CI) (CA INDEX NAME)

IT 203048-97-9P 387357-08-6P 387357-09-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and dopamine transporter binding of tropane-based irreversible ligands with interest in developing cocaine abuse treatment)

RN 203048-97-9 CAPLUS

CN Benzenamine, 4-[4-[(3-endo)-3-[bis(4-fluorophenyl)methoxy]-8-azabicyclo[3.2.1]oct-8-yl]butyl]- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 387357-08-6 CAPLUS

CN Benzenamine, 4-[3-[(3-endo)-3-[bis(4-fluorophenyl)methoxy]-8-azabicyclo[3.2.1]oct-8-yl]propyl]- (9CI) (CA INDEX NAME)

RN 387357-09-7 CAPLUS

CN Benzenamine, 4-[3-[(3-endo)-3-[bis(4-fluorophenyl)methoxy]-8-azabicyclo[3.2.1]oct-8-yl]propyl]-2-iodo-(9CI) (CA INDEX NAME)

Relative stereochemistry.

IT 387357-17-7P 387357-18-8P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and dopamine transporter binding of tropane-based irreversible ligands with interest in developing cocaine abuse treatment)

RN 387357-17-7 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 8-[3-(4-azido-3-iodophenyl)propyl]-3-[bis(4-fluorophenyl)methoxy]-, (3-endo)-, ethanedioate (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 387357-10-0 CMF C29 H29 F2 I N4 O

CM 2

CRN 144-62-7 CMF C2 H2 O4

RN 387357-18-8 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 3-[bis(4-fluorophenyl)methoxy]-8-[3-(4-isothiocyanatophenyl)propyl]-, monohydrochloride, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

● HCl

REFERENCE COUNT:

32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 177 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER:

2001:749720 CAPLUS

DOCUMENT NUMBER:

136:37802

TITLE:

Synthesis and biological evaluation of tropane-like

1-{2-[bis(4-fluorophenyl)methoxy]ethyl}-4-(3-phenylpropyl)piperazine (GBR 12909) analogs

Zhang, Ying; Joseph, David B.; Bowen, Wayne D.; Flippen-Anderson, Judith L.; Dersch, Christina M.;

Rothman, Richard B.; Jacobson, Arthur E.; Rice, Kenner

c.

CORPORATE SOURCE: Laboratory of Medicinal Chemistry National Institute

of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, MD,

20892-0815, USA

SOURCE: Journal of Medicinal Chemistry (2001),

44(23), 3937-3945

CODEN: JMCMAR; ISSN: 0022-2623

American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

AUTHOR(S):

PUBLISHER:

OTHER SOURCE(S): CASREACT 136:37802

The authors have prepared azabicyclo[3.2.1] derivs. (C-3-substituted tropanes) that bind with high affinity to the dopamine transporter and inhibit dopamine reuptake. Within the series, 3-{2-[bis-(4fluorophenyl)methoxy]ethylidene}-8-methyl-8-azabicyclo[3.2.1]octane (I) was found to have the highest affinity and selectivity for the dopamine transporter. These azabicyclo[3.2.1] (bridged piperidine) series of compds. differ from the well-known benztropines by a 2-carbon spacer between C-3 and a diarylmethoxy moiety. Interestingly, these new compds. demonstrated a much lower affinity for the muscarinic-1 site, at least a 100-fold decrease compared to benztropine. Interestingly, these new compds. demonstrated a much lower affinity for the muscarinic-1 site, at least a 100-fold decrease compared to benztropine. Replacing N-Me with N-phenylpropyl in two of the compds. resulted in a 3-10-fold increase in binding affinity for the dopamine transporter. However, those compds. lost selectivity for the dopamine transporter over the serotonin transporter. Replacement of the ether oxygen in the diarylmethoxy moiety with a nitrogen atom gave relatively inactive amines, indicating the important role which is played by the ether oxygen in transporter binding. Reduction of the C-3 double bond in I gave 3α -substituted tropanes, as shown by X-ray crystallog. analyses. The 3α -substituted tropanes had lower affinity and less selectivity than the comparable unsatd. ligands.

IT 380602-02-8P 380602-03-9P

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (preparation, muscarinic M1 receptor, dopamine and serotonin transporter affinity, and structure-activity relationship of azabicyclooctane derivs. as GBR 12909 analogs)

RN 380602-02-8 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 3-[2-(diphenylmethoxy)ethyl]-8-(3-phenylpropyl)-, hydrochloride, (3-endo)- (9CI) (CA INDEX NAME)

CN 8-Azabicyclo[3.2.1]octane, 3-[2-[bis(4-fluorophenyl)methoxy]ethyl]-8-(3-phenylpropyl)-, hydrochloride, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

● HCl

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 177 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:574757 CAPLUS

DOCUMENT NUMBER: 135:303847

TITLE: Design and Synthesis of [(2,3-Dichlorophenyl)piperazin-

1-yl]alkylfluorenylcarboxamides as Novel Ligands Selective for the Dopamine D3 Receptor Subtype

AUTHOR(S): Robarge, Michael J.; Husbands, Stephen M.; Kieltyka,

Andrzej; Brodbeck, Robbin; Thurkauf, Andrew; Newman,

Amy Hauck

CORPORATE SOURCE: Medicinal Chemistry Section, National Institute on

Drug Abuse-Intramural Research Program, Baltimore, MD,

21224, USA

SOURCE: Journal of Medicinal Chemistry (2001),

44(19), 3175-3186

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:303847

CONH (CH₂) 4N N C1 C1

AB The dopamine D3 receptor subtype has been recently targeted as a potential neurochem. modulator of the behavioral actions of psychomotor stimulants, such as cocaine. However, definitive behavioral investigations have been hampered by the lack of highly selective D3 agonists and antagonists. In

Ι

an attempt to design a novel class of D3 ligands with which to study this receptor system, a series of chemical divergent compds. that possessed various structural features that exist within several classes of reputed D3 agents was screened and compared to the recently reported NGB 2904. On the basis of these results, a novel series of compds. was designed that included functional moieties that were required for high-affinity and selective binding to D3 receptors. All the compds. in this series included an aryl-substituted piperazine ring, a varying alkyl chain linker (C3-C5), and a terminal aryl amide. The compds. were synthesized and evaluated in vitro for binding in CHO cells transfected with human D2, D3, or D4 receptor cDNAs. D3 binding affinities ranged from Ki = 1.4 to 1460 The most potent analog in this series, I, demonstrated a D3/D2 selectivity of 64 and a D3/D4 selectivity of 1300. Structure-activity relationships for this class of ligands at D3 receptors will provide new leads toward the development of highly selective and potent mol. probes that will prove useful in the elucidation of the role D3 receptors play in the psychomotor stimulant and reinforcing properties of cocaine. 264869-03-6 367275-32-9

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(preparation of [(2,3-dichlorophenyl)piperazin-1-

yl]alkylfluorenylcarboxamides as ligands selective for the dopamine D3 receptor)

RN 264869-03-6 CAPLUS

IT

CN 8-Azabicyclo[3.2.1]octane, 3-[bis(4-fluorophenyl)methoxy]-8-(4-phenylbutyl)-, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

Ph
$$(CH_2)_4$$
 N

RN 367275-32-9 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 3-[(3-chlorophenyl)phenylmethoxy]-8-(3-phenylpropyl)-, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

REFERENCE COUNT:

THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 177 CAPLUS COPYRIGHT 2007 ACS on STN ACCESSION NUMBER: 2001:560064 CAPLUS

135:137519 DOCUMENT NUMBER:

TITLE: Preparation of 1-(4-arylpiperidinopropyl)carbamoyl-2-

piperidone-5-carboxylates and analogs as α 1c

antagonists

INVENTOR(S): Nagarathnam, Dhanapalan; Chiu, George; Dhar, T. G.

Murali; Wong, Wai C.; Marzabadi, Mohammad R.; Gluchowski, Charles; Lagu, Bharat; Miao, Shou Wu

Synaptic Pharmaceutical Corp., USA

PATENT ASSIGNEE(S):

SOURCE: U.S., 67 pp., Cont.-in-part of U.S. Ser. No. 340,611,

abandoned. CODEN: USXXAM

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

P	ATENT	NO.			KIND DATE					APPL	ICAT	ION I	DATE					
-	s 6268											19970516 <						
We	0 9614	9614846				A1 19960523				WO 1	995-	US15	19951116 <					
	W:	AM,	ΑT,	ΑU,	BB,	BG,	BR,	BY,	CA,	CH,	CN,	CZ,	DE,	DK,	EE,	ES,	FI,	
		GB,	GE,	HU,	IS,	JP,	KE,	KG,	ΚP,	KR,	ΚZ,	LK,	LR,	LT,	LU,	LV,	MD,	
		MG,	MN,	MW,	MX,	NO,	NZ,	PL,	PT,	RO,	RU,	SD,	SE,	SG,	SI,	SK,	ТJ,	
		TM,																
	RW:	KE,	LS,	MW,	SD,	SZ,	UG,	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙE,	
		IT,	LU,	MC,	NL,	PT,	SE,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	ML,	MR,	
		NE,	SN,	TD,	TG													
U	S 6248	747		•	B1 20010619					US 1	999-	2915	19990414 <				<	
U	S 6727	257			В1		2004	0427		US 2	000-	7304	58		2	0001	205	
PRIORI'	TY APE						US 1	994-	3406	11		B2 1	9941	116				
										WO 1	995-	US15	025	1	W 1	9951	116	
										US 1	997-	8366	28		A1 1	9970	516	
										US 1	997-	9786	82	A3 19971126				
OTHER !	SOUDCE	1/21 .			MZDI	יי ע כ	135.	1375	1 9									

OTHER SOURCE(S): MARPAT 135:137519 GI

$$R^1$$
 NR^4
 R^2
 N^3

AΒ Title compds. [e.g., I; R = (un)substituted (hetero)aryl; R1 = H, (fluoro)alkyl, cyano, CO2R3, etc.; R2 = H, alkyl, OR3, etc.; R3 = H, (fluoro)alkyl, etc.; R4 = e.g, (4-arylpiperidinopropyl)carbamoyl; X = O, S, (alkyl)imino] and analogs thereof were prepared Over 60 synthetic examples were provided. Thus 1,6-dihydro-5-(cyanoethoxycarbonyl)-4-ethyl-6-(4-nitrophenyl)-2-methoxypyrimidine (prepared in 3 steps) was treated with 4-nitrophenylchloroformate (acylation at N1) followed by the corresponding substituted piperidine to give the N1 carboxamide intermediate. The cyanoethoxycarbonyl function was saponified and converted to the 5-carboxamido derivative II. Thus, title compound II had pKi of 9.74 for binding at human α 1c receptors in vitro. Treatment of benign prostatic hyperplasia is a claimed use of the invention. 179481-64-2P 179481-65-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 1-(4-arylpiperidinopropyl) carbamoyl-2-piperidone-5-carboxylates and analogs as α lc antagonists)

179481-64-2 CAPLUS

ΙT

RN CN

L5

5-Pyrimidinecarboxylic acid, 6-(3,4-difluorophenyl)-1,2,3,6-tetrahydro-1-[[[3-(3-hydroxy-3-phenyl-8-azabicyclo[3.2.1]oct-8-yl)propyl]amino]carbonyl]-4-methyl-2-oxo-, methyl ester (9CI) (CA INDEX NAME)

RN 179481-65-3 CAPLUS

CN 5-Pyrimidinecarboxylic acid, 6-(3,4-difluorophenyl)-1,2,3,6-tetrahydro-1[[[3-(3-hydroxy-3-phenyl-8-azabicyclo[3.2.1]oct-8yl)propyl]amino]carbonyl]-4-methyl-2-oxo-, methyl ester, monohydrochloride
(9CI) (CA INDEX NAME)

● HCl

REFERENCE COUNT: 67 THERE ARE 67 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ACCESSION NUMBER:

2001:338355 CAPLUS

DOCUMENT NUMBER:

134:340509

TITLE:

Preparation of 8-azabicyclo[3.2.1]octane NMDA/NR2B

antagonists

INVENTOR(S):

Thompson, Wayne; Claremon, David A.; Munson, Peter M.;

Phillips, Brian

PATENT ASSIGNEE(S):

Merck & Co., Inc., USA PCT Int. Appl., 77 pp.

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WO	WO 2001032179					A1 20010510				WO 2	000-	US29		20001026 <			
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		CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EE,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	HR,
		HU,	ID,	IL,	IN,	IS,	JP,	ΚE,	KG,	KR,	ΚZ,	LC,	LK,	LR,	LS,	LT,	LU,
		LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	ΜZ,	NO,	ΝZ,	PL,	PT,	RO,	RU,	SD,
		SE,	SG,	SI,	SK,	SL,	ТJ,	TM,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VN,	YU,
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OTHER SO	MAR	PAT	134:	3405)9												

$$R^{1}-L^{1}-N$$
 X
 $L^{2}-R^{2}$ I

The title compds., commonly known as tropanes, (I) [wherein R1 = AB (un) substituted 2-benzimidazole, imidazole, imidazopyridiné, indole, quinazoline, purine, benzoxazolone, or phenol; R2 = Ph, optionally substituted with 1-5 substituents selected from Cl, F, Br, alkyl, CF3, OH, or CO2H; L1 and L2 = independently (cyclo)alkyl, alkenyl, alkynyl, alkoxy, aminoalkyl, hydroxyalkyl, or (amino)carbonyl; X = OH, NH2, (di)alkylamino, alkyl, ester, carbamate, carbonate, or ether] were prepared as effective NMDA NR2B glutamate receptor antagonists. For example, addition of di-Et 4-chlorobenzylphosphonate to N-carbethoxy-4-tropinone to give the benzylidene, reduction using Pt/C, N-deprotection using HBr in AcOH, and reductive addition of 1-(trimethylsilylethoxymethyl)-1H-benzimidazole-2-carbaldehyde (2-step preparation given) using NaBH(OAc)3 in ClCH2CH2Cl afforded exo-II. Exptl. protocols for assessing the inhibition of NR1A/2B NMDA receptor activation (FLIPR assay) and determining the apparent dissociation consts.

against the human NR1A/NR2B receptor (binding assay) are given (no data). I are useful for relieving pain and treating migraine, depression, anxiety, schizophrenia, Parkinson's disease, or stroke (no data).

IT 338733-30-5P 338733-34-9P 338733-35-0P

338733-37-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; preparation of (benzimidazolylalkyl)tropane NMDA/NR2B antagonists for treatment of pain)

RN 338733-30-5 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 8-[3-[4-(phenylmethoxy)phenyl]propyl]-3-(phenylmethyl)-, (3-exo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 338733-34-9 CAPLUS

CN 1H-Benzimidazole-1-propanenitrile, 2-[3-[3-(phenylmethyl)-8-azabicyclo[3.2.1]oct-8-yl]propyl]- (9CI) (CA INDEX NAME)

$$(CH_2)_{3}$$
 CH_2-CH_2-CN
 CH_2-CH_2-CN

RN 338733-35-0 CAPLUS

CN 8-Azabicyclo[3.2.1]octane-8-butanoic acid, 3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$HO_2C-(CH_2)_3$$
 N
 CH_2-Ph

RN 338733-37-2 CAPLUS

CN 8-Azabicyclo[3.2.1]octane-8-butanoic acid, 3-(phenylmethyl)-, phenylmethyl ester (9CI) (CA INDEX NAME)

338732-79-9P 338732-81-3P 338732-86-8P ΙT 338732-89-1P 338732-91-5P 338732-92-6P 338733-09-8P. 338733-10-1P 338733-13-4P 338733-16-7P 338795-47-4P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of (benzimidazolylalkyl)tropane NMDA/NR2B antagonists for treatment of pain) 338732-79-9 CAPLUS RN 8-Azabicyclo[3.2.1]octane, 8-[3-(1H-imidazol-4-yl)propyl]-3-(phenylmethyl)-

Relative stereochemistry.

CN

, (3-exo)- (9CI) (CA INDEX NAME)

RN 338732-81-3 CAPLUS Phenol, 4-[3-[(3-exo)-3-(phenylmethyl)-8-azabicyclo[3.2.1]oct-8-yl]propyl]-CN (CA INDEX NAME)

Relative stereochemistry.

RN 338732-86-8 CAPLUS

Phenol, 4-[3-[(3-exo)-3-[(4-chlorophenyl)methyl]-8-azabicyclo[3.2.1]oct-8-CN yl]propyl] - (9CI) (CA INDEX NAME)

RN 338732-89-1 CAPLUS

CN Phenol, 4-[3-[(3-exo)-3-(phenylmethyl)-8-azabicyclo[3.2.1]oct-8-yl]butyl]-(9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 338732-91-5 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 8-[3-(1H-benzimidazol-2-yl)propyl]-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

$$NH$$
 (CH₂) 3- NH CH₂-Ph

RN 338732-92-6 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 8-[3-(1H-imidazo[4,5-b]pyridin-2-yl)propyl]-3-(phenylmethyl)- (9CI) (CA INDEX NAME)

RN 338733-09-8 CAPLUS

CN 8-Azabicyclo[3.2.1]octane, 8-[3-(1H-imidazol-4-yl)propyl]-3-(phenylmethyl)-(9CI) (CA INDEX NAME)

RN 338733-10-1. CAPLUS

CN Phenol, 4-[3-[3-(phenylmethyl)-8-azabicyclo[3.2.1]oct-8-yl]propyl]- (9CI) (CA INDEX NAME)

RN 338733-13-4 CAPLUS

CN Phenol, 4-[3-[3-[(4-chlorophenyl)methyl]-8-azabicyclo[3.2.1]oct-8-yl]propyl]- (9CI) (CA INDEX NAME)

RN 338733-16-7 CAPLUS

CN Phenol, 4-[3-[3-(phenylmethyl)-8-azabicyclo[3.2.1]oct-8-yl]butyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \\ \text{-} \text{CH-CH}_2\text{--}\text{CH}_2 \\ \\ \text{CH}_2\text{--}\text{Ph} \end{array}$$

RN 338795-47-4 CAPLUS

CN Phenol, 4-[3-[(3-endo)-3-[(4-chlorophenyl)methyl]-8-azabicyclo[3.2.1]oct-8-yl]propyl]- (9CI) (CA INDEX NAME)

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